

MENTAL HEALTH BUDGET

EFFECTS ON

INCARCERATION RATES

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Abstract

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The economies of the 1960s and 1970s resulted in funding cuts to institutional and community mental health services, and increases in the number of those needing mental health services in jails and prisons. The consequences of the current recession are not yet clear, and data are not currently systematically collected to determine the extent to which the recession is impacting the delivery of mental health services in correctional institutions. However, there is considerable evidence that the costs of housing the mentally ill in jails and prisons are considerable and increasing. This exploratory study uses information obtained from state mental health budgets in 2009 and 2011, state unemployment rates for 2011, and prison incarceration rates for 2011 to examine how contemporary mental health budget cuts are impacting prisons incarceration rates.

Introduction

In the decades prior to the 1960s, the severely mentally ill were customarily housed in asylums. Many of them were placed there because they were considered a danger to the community or too difficult to care for at home (Grob, 1992). However, the costs of institutionalizing the severely mentally ill became prohibitive when an increasing number of patients were hospitalized for extended periods of time—often until they died, resulting in overcrowding (Grob,1992).

After years of unsustainable spending on institutional placements, mental health treatment in the community was considered a viable option. By the early 1960s, at least two medical-related developments changed the way the severely mentally ill received treatment. First, pharmaceutical research into the use of psychotropic drugs led to advances in treatment and gave medical professionals the confidence to use psychotropic medications with the mentally ill while they were treated through the use of community mental health services (Grob, 1992). Second, psychiatry gained legitimacy in the medical field and, while it was initially seen as a profession practiced primarily in institutions, its utility was finally recognized in community mental health as well (Grob, 1992).

Over the last several decades, policies have been implemented to again shift funding from institutional mental health services to community mental health services. With this shift, financial responsibility moved from state governments to the Federal government. State governments were happy to see their expenses decrease, but as with many reforms there were unanticipated consequences. For example, it is well documented that when the residents of mental health institutions were released to receive

community-based treatment, community-based agencies were ill-prepared to meet their needs and, as a consequence, many of them were arrested and subsequently incarcerated in local jails and state prisons. While reducing the number of persons placed in mental health facilities may have initially resulted in decreased state expenses, many states are now reporting additional expenses associated with the incarceration of the mentally ill. In fact, Connecticut reported that the expense for housing a mentally ill inmate is twice that of a regular inmate (Phaneuf, 2012). In the state of Oklahoma alone, the Department of Corrections spent over \$8 million in 2011 for mental health services for inmates (Marx, 2012). Additionally, in Tamms, a super-max prison in the state of Illinois, 1 of every 10 prisoners receives psychotropic drugs at an annual cost of about \$27 million (Marx, 2012). This does not include the costs associated with additional staff training that is needed when correctional officers are interacting with the mentally ill. Governor Dannel Malloy of Connecticut verbalized what many have been thinking: "By default, the prison system becomes a new version of the state mental health hospitals" (Phaneuf, 2012).

The current recession has adversely affected nearly everyone in the United States, but it has disproportionately affected some more than others. The mentally ill, especially those who are poor, are disproportionately impacted when mental health resources are cut. The National Alliance on Mental Illness reported that between 2009 and 2011, \$1.8 billion were cut from state mental health budgets, which represents about 8 percent of their total mental health budgets. Michael Fitzpatrick, executive director of the National Alliance on Mental Illness, asserted that when cuts are made to mental health budgets, "People end up involved in the criminal justice system, living in homeless shelters and

going to the emergency room" (Gold, 2011). To be sure, the greater the need for mental health services—especially among those who are prescribed psychotropic medications—the greater the potential consequences for the individual and society. For example, severely mentally ill people are more likely to come to the attention of law enforcement and are more likely to become detained in prisons and jails, than those who do not suffer from severe mental illness (Wettstein, 1998). In essence, when mental health services are cut, county jails and prisons serve as dumping grounds to keep society free from those who are living with mental illness.

This study originated out of concern that the mental health system was failing to provide services that the severely mentally ill require to function effectively in society. This concern exacerbated when states reported huge cuts to social welfare programs that specifically supported the needs of the mentally ill. While the impact of deinstitutionalizing the mentally ill has been evaluated by numerous scholars, nothing to date has been done to assess how mental health expenditures affect incarceration rates at the national level during the Great Recession. This exploratory study attempts to fill that void by examining how mental health spending, state unemployment rates, and the availability of mental health services are related to incarceration rates. Specifically, this study examines whether 2011 incarceration rates are related to whether a state increased or decreased spending on mental health services.

A Brief History of Mental Health Services

In 1955, President Eisenhower appointed a blue ribbon panel, the Joint Commission on Mental Illness and Health, to examine how the U.S. might better deliver

mental health services to those who were most in need. The core problem, as the Joint Commission saw it, was how the mentally ill in state mental institutions were treated (Joint Commission on Mental Illness and Health, 1961). In the years to come, the mental health movement of the 1960s and 1970s ultimately laid the ground work for the Federal government to forge the pathways to better mental health services and the passage of Community Mental Health Center legislation in 1963.

In the early 1960s, there were about 526,000 state and county mental health facilities (Frank & Glied, 2006). Some of the residents were mentally ill; some were mentally challenged. These facilities were extremely expensive to operate and to staff, and they were funded at the state level (Foley & Shaerfstein, 1983). The standard of care provided to the patients was said to be substandard and abusive due to understaffing and limited treatment options. If that was not bad enough, treatment options for the mentally ill were painful and oftentimes life-threatening. None of the treatments were found to be effective long-term. Patients were subjected to electroconvulsive therapy, where electrodes were placed on the head and currents of electricity were sent through the brain. While the visible consequence of these treatments was violent convulsions, the theory was that the brain would somehow change during this procedure and begin to function normally. Another treatment was insulin shock therapy where large doses of insulin were injected into the patient's system to induce convulsions or coma. The thought that schizophrenic symptoms were not present at the same time as epileptic convulsions led practitioners to believe this was an effective treatment and would result in normal behavior when the person recovered. The most invasive and harmful of all the treatments

was the frontal lobotomy. This procedure was performed to interrupt connections in the brain from the frontal lobe to other areas of the brain. Small incisions were made in the brain or alcohol injections were used to destroy brain tissue. The intended long term result of this was control of emotion and anxiety disorders. Infection was a huge risk in this procedure resulting in death. None of these treatments were proven to have long term benefits and some patients died while undergoing this type of treatment (Frank & Glied, 2006).

In 1963, the Community Mental Health Act (CMHA) was passed by John F. Kennedy (Frank & Glied, 2006). CMHA provided federal funding to create community mental health centers, which would provide services for the mentally ill and help them to lead more fulfilling lives. It was intended to provide outpatient services so those living with chronic mental illness could obtain independent housing, psychiatric services and medications to stabilize their illness. The policy was to ensure funding was allotted to provide MH centers fully staffed by mental health professionals, in communities, so that those who needed care could obtain it without being institutionalized. The increase in availability of psychotropic medication, although there were not many available at the time, made mental health professionals and Federal authorities feel confident that the mentally ill could live productively in society.

Following the passage of the CMHA, the deinstitutionalization of most of the severely mentally ill began. Unfortunately, the patients were released before the communities had the federal funds to create mental health centers and provide community-based care (Frank & Glied, 2006). This led to increased homelessness and

no treatment for the mentally ill. As might be expected, this also led to an increased in the incarceration of the mentally ill as a result of the behaviors displayed by the symptomatic patients (Raphael, 2000). Most behaviors were disturbances of the peace or some form of nonviolent crime, but the justice systems had to arrest and detain them because there were no longer a vast array of mental health detention options.

In 1964, President Johnson passed the Great Society Initiative which enacted Medicare, Medicaid, and Social Security Insurance to pay for the care of the mentally ill while living in the community (Frank & Glied, 2006). This was entitlement money given to the disabled so they could afford housing and have insurance to obtain treatment and medication while they lived free in society. In spite of good intentions, the Great Society Initiatives did not have the positive outcomes administrators had hoped for. Because their symptoms were too severe to comprehend what they had to do to live in the community, the severely mentally ill were unprepared for what they would encounter. Most of them did not obtain the prescriptions they needed before they left the state hospital, and even when they had their prescriptions many did not consistently take their medications. Either way, their behaviors became unstable. Many ended up homeless and living on the streets. Others became incarcerated in county jails and state prison facilities due to the crimes they committed (Frank & Glied, 2006).

While some of the mentally ill chose to be homeless, others were homeless for no fault of their own. Medicare, Medicaid, and Social Security required that recipients had to have a permanent address to receive support services and monetary resources for housing. But many could not even apply because when they were released from the

institution they had no permanent address (Mowbray&Holter, 2002). While the community mental health centers were intended to provide the service to help the mentally ill (and their families) work through common obstacles, they had not been established prior to their release. Deinstitutionalization continued through the decade of the 1970s, and the implementation of CMHC had still not happened.

In 1964, the Civil Rights Act was passed requiring that all people be treated equally. This act was intended to provide equality for housing, employment and all people were entitled to fair treatment, even the mentally ill (Frank & Glied, 2006). This had consequences for the involuntarily committed patients who remained in mental facilities. Now people had the right to refuse treatment unless they were found (by a judicial officer) to be a harm to themselves or others. The Civil Rights Act of 1964 also prevented medical staff to force patients to take medication if patients resisted.

During the decade of the 1970s, studies were being conducted to find the cause of mental illness with the hope that more effective pharmaceuticals could help the mentally ill remain in the community. It was found during this decade that schizophrenia had a genetic predisposition and could be influenced by environmental factors. This information made schizophrenia more socially acceptable. Knowing the chemical factors of the disease also expanded the capabilities of creating more effective medication to stabilize the behavior of schizophrenics and allow them to have fairly normal lives in the community. The 1970s is remembered as a time when mental illness became more widely understood and accepted, and activists influenced substantial social change (Tucker et. al, 2001).

In 1978, President Jimmy Carter signed legislation to increase federal funding for CMHC (Frank & Glied, 2006). Energized by President Carter's wife, Rosalynn, an active advocate for the mentally ill, President Carter signed into law the Mental Health Systems Act of 1980, which was considered landmark legislation for advancements in mental health care. To many people's chagrin, the Mental Health System's Act of 1980 was never implemented because President Carter's term in office ended and there was a change in administration.

In 1981, President Ronald Reagan took office and made tremendous cuts in all welfare programs (Frank & Glied, 2006). Faced with a recession, President Reagan advocated for reductions in federal spending and tax cuts on businesses so the economy could thrive. Major cuts were made to all welfare programs leaving several people without needed services. Unemployment rates raised and less tax monies were being collected to support social welfare programs.

Legislation in the 1990s through the early 2000s primarily focused on parity laws. Congress passed into law, during the administration of Present Bill Clinton, The Mental Health Parity Act of 1996 and The Health Insurance Portability and Accountability Act which mandated that the annual or lifetime dollar limits on mental health benefits can be no lower than the limits that are set for medical and surgical benefits offered by a group health plan or a health insurance company. After much opposition, a sunset provision was attached that stipulated that if the law were passed it would be implemented in 1997 and end in 2001. The Acts passed. The Mental Health Equitable Treatment Act of 2001, which was intended to extend the provisions of The Mental Health Parity Act of 1996

never made it out of committee. President George W. Bush signed a one year extension of The Mental Health Equitable Treatment Act of 2001. After a series of one year extensions, the Mental Health Parity Act was passed into law in 2007. By 2008, about half of the states had passed laws requiring full insurance parity between mental health coverage and physical health coverage (Sundararaman & Redhead, n.d.)

The Current State of Mental Health Services

While the U.S. is dealing with the worst Recession since the Great Depression (known by some as the Great Recession), the National Institute of Mental Health contends that 1 in 17 people live with serious mental illness, including schizophrenia, bipolar disorder and depression (National Institute of Mental Health 2008). Yet, most states have cut substantial portions out of their mental health budgets. These cuts include reductions in community-based and hospital-based psychiatric care, housing for the mentally ill, and pharmaceutical supplies.

Thirty-one states and the District of Columbia made cuts to their mental health budgets. Many states made rather deep cuts to their budgets. For example, Alaska cut 35% (or \$48 million) from its mental health budget; South Carolina and Arizona cut about 23% (or \$41 million and \$108 million, respectively); and Washington, D.C. and Nevada cut 19% (\$44 million) and 17% (\$39 million), respectively. The National Alliance on Mental Illness (2011) reported that prior to the recession about half of those suffering from severe mental illness did not receive mental health services in the previous year (Kessler et al, 2005), and it is reasonable to assume that with these major cuts to

services that even fewer people will avail themselves to services they need in order to have a quality life.

Particularly disturbing are state cuts for resources designated to pay for such things as prescriptions, case management, crisis services, housing, workforce development, and acute and interim inpatient care. Additionally, states are downsizing their professional workforces, including psychiatrists, psychologists, and social workers. While services and personnel are being cut, The National Alliance on Mental Illness (2011) reports that there has been an increase in the demand for such things as crisis services, emergency psychiatric screening services, and inpatient psychiatric care.

Mental Illness and the Criminal Justice System

Police are the first justice system practitioner to come into in contact with the mentally ill in a crisis situation. Officers were are typically not trained to respond to mentally ill suspects, especially during a psychotic episode, and it is common for them to react with force when it may not be necessary to establish control over the situation (Tricket, et. al., 1998). Such a situation occurred in Memphis, Tennessee, for example, and the encounter ended with a mentally ill person being shot by a police officer who was unfamiliar with the man and untrained to deal with the mentally ill.

This incident started the creation of Crisis Intervention Teams (CIT) to educate police officers on the symptoms of mental illness. The 40 hour training program taught about verbal and nonverbal behaviors that are displayed by persons suffering from various illnesses such as depression, bipolar, schizophrenia and personality disorder.

This course also provided training in active listening, de-escalating techniques, and psychotropic medications and their side-effects so that officers could have the information they needed when they came into contact with the mentally ill (Tucker. et. al, 2011).

Also, the Memphis community established a drop-off facility where police officers may drop off those they suspect are suffering from mental illness. At this facility the individuals are evaluated by mental health professionals and then sent to treatment if needed. This facility allows for police officers to be back to their shift within thirty minutes to serve the community (Tucker, et al., 2001)

Other options for the mentally ill in trouble with law enforcement are jail diversion programs. Jail diversion can occur before a person is arrested or at any time during the court case (Shafer, et. al. 2004). If this occurs before the arrest process, it would involve dropping the person off at the mental health center. If jail diversion were to occur during the court process, the person can be ordered to obtain mental health treatment along with other community-based punishments such as probation and community service. This would prevent the person from spending any time behind bars and allow for treatment of the illness without the expense of incarcerating the accused in the jail or prison system (Shafer, et. al. 2004).

Another recent innovation is the creation of mental health courts. These have been in practice since 1998, and they specialize in responding to the mentally ill with appropriate treatment options. They act somewhat like the jail diversion programs by keeping the mentally offender out of jail. The offender enters into a treatment program

for rehabilitation, and through the sentence the accused is held accountable to the mental health court (Watson, et. al., 2001)

Very little is known about the full extent to which the mentally ill populate our jails and prisons. There is no national database currently available, and what we do know comes only from those who have been previously diagnosed as suffering from mental illness. We know virtually nothing about the mentally ill who were not previously diagnosed and treated by mental health professionals. With that said, among those who have been previously diagnosed, several studies suggest that the mentally ill are at high risk of incarceration. As populations in state mental hospitals declined, the presence of the severely mentally ill in county jails increased (Lamb & Weinberger, 1998; Torrey et al., 1993; Teplin, 1984). The risk appears to increase among the mentally ill when there are co-occurring disorders, such as a combination of severe mental illness and alcohol, substance abuse, or homelessness (Lamb & Weinberger, 1998; Torrey et al., 1993; Abram & Teplin, 1991).

The rate at which we are incarcerating the mentally ill appears to be increasing. For example, the National Alliance on Mental Illness reported that on any given day in 1993 about 7 percent of jail inmates nation-wide were seriously mentally ill (Torrey et al., 1993). Just six years later, in 1998, the U.S. Department of Justice estimated that the percentage of seriously mentally ill in jails had risen to 16% (Ditton, 1999). The same report also estimated that 16% of state prison inmates and about 7% of federal prison inmates suffered from serious mental illnesses (Ditton, 1999). An Ohio study found even more compelling evidence of the high rate at which the mentally ill are incarcerated.

Between 1990 and 1996, while the state of Ohio had an increase of 43% in its prison population, the number of mentally ill persons in prison for the same time period increased by 285% (Ludlow, 1996).

When policies were passed to alleviate terrible living conditions in mental health hospitals and provide patients with better opportunities for therapeutic treatment no one expected that our nation's correctional facilities would house so many of the mentally ill. And, the incarceration of the mentally ill is considerable more costly than state mental health facility expenses (Schmidt, et. al 2010). Further, the jail and prison environments are far from the type of environment that tends to work with mentally ill populations. Crowded conditions, close proximity to others at all time, no access to outside activities, and constant supervision often exacerbate mental illnesses and result in agitated, aggressive, or otherwise psychotic episodes (Toch & Adams, 2002).

The mentally ill are frequently disruptive due to psychotic symptoms and aggravation caused by the prisoners being in such close proximity (Toch & Adams, 2002). Although the mentally ill often enter the system on misdemeanor charges, they spend longer terms of incarceration due to erratic behavior. It is estimated that a mentally ill offender spends twice his original sentence due to extensions from behavioral infractions (Wettstein, 1998). Additionally, states pay for mental health treatment while a person is in prison. Prisoners and veterans are the only populations who are guaranteed one hundred percent medical coverage (Landsberg, et. al, 2002).

The Present Study

Data, Variables, and Analytic Procedures

The data for this exploratory study were collected from four sources: the National Alliance on Mental Illness, the Department of Mental Health and Addiction, Bureau of Labor Statistics, and the Bureau of Justice Statistics. The National Alliance on Mental Illness publishes reports on the types of services provided for the mentally ill within each state. The Department of Mental Health and Addiction publishes information on per capita mental health spending in each state. The Bureau of Labor Statistics provides national, state, and regional economic indicators. Data published by the Bureau of Justice Statistics were used to obtain prison incarceration rates for each state. Jail incarceration rates are not included in this study. Since jails are primarily local facilities, supported through county funds, there is no national database on jail incarceration rates by state.

The analyses will involve frequencies, percentages, and measures of central tendency. Regression is used to assess the extent to which mental health services, unemployment rate, and per-capita spending explain the incarceration rate within states that increased mental health spending and states that decreased mental health spending.

Table 1 contains the variables and coding. “Mental Health Spending” is the control variable. It is used to divide states into two groups: states that increased spending on mental health services (coded 1) from 2009 to 2011 and states that decreased spending (coded 0) on mental health services from 2009 to 2011. While 19 states (38%) increased

spending for mental health services, thirty-one states (62%) decreased funding for mental health services.

There are 14 independent variables. As can be seen in Table 1, most of them are coded Yes (1) or No (0) to signify whether the state has that service or does not have that service. A limitation of this study is that data are not available on whether spending increased or decreased by service or that funding is inadequate, for example. Data are only available on whether a service exists in a state. For example, “Medicaid” is a measure of whether Medicaid is in place when a person is released from incarceration so they can obtain treatment and medication for their mental illness as soon as they are released into the community. “Uninsured” is mental health coverage for the uninsured for those who do not have private health insurance or who have not completed the Medicaid application process. This state funded money provides sliding scale fees depending on income.

“Education” refers to public education about mental illness in order to help create a culture of understanding and support for the mentally ill. Ninety-six percent of states provide public education about mental illness. “Jail Diversion” is an alternative to formal processing. “Jail Diversion” for the mentally ill may include court ordered mental health treatment and medication along with supervised release into the community. Eighty-six percent of states have jail diversion programs in place. “Crisis Teams” are crisis intervention programs that are operated by police department. They exist in 92% of states. “Crisis Teams” officers trained to identify the presence of mental illness, pre

arrest, to seek mental health services or to have additional assessments performed by trained professionals.

“Re-entry Programs” ensure the prisoners with mental illness have the accommodations they need to return to the community. These accommodations include a treatment center to obtain psychiatric services, medication and professions to assist in obtaining permanent housing. “Mental Health Courts” are flexible to respond to the special circumstances of the mentally ill and include treatment as a portion of the sentence. Re-entry programs and mental health court are found in 80% of states.

“Benzodiazepines,” are a family of medications commonly used to reduce anxiety and they are used here to refer to a medication program in which the mentally ill may avail themselves to anti-anxiety medications. Ninety-two percent of states have Benzodiazepine programs. “Antipsychotic medications” programs exist in 90% of states. “Co-occurring disorder treatment” programs are oriented toward the mentally ill who are also alcohol or drug addicted. These programs exist in 98% of states.

“Permanent Housing” programs exist in 82% of states. They provide long-term housing and mental health treatment. “Temporary Housing” programs provide short-term housing for the mentally ill. They exist in 46% of states. There may be no treatment while living in temporary housing programs.

“Per-Capita Spending” is mental health expenditures per capita, and it is the estimated amount of money the state spends per person for mental health services. On

average, states spend about \$126 per person on mental health services. Additionally, 46% of states have programs that pay for mental health services for the “Uninsured.”

The average “Unemployment Rate” for each state is used as a general measure of the economy in 2011. The average unemployment rate for the United States in 2011 was 8.12 (excluding Washington, D.C.). The unemployment rate ranged from 3.5 to 13.5.

The dependent variable is the “incarceration rate” for 2011. The 2011 incarceration rate is an estimate based on previous years’ incarceration rates. The 2011 data are not yet available. For research purposes, 2011 was selected because the budget data and program data reflect 2009 expenditures and most offenders, if incarcerated, will take between one and two years to process to be reflected in the incarceration rate for their respective state.

Table 1: Variables, Coding, and Distribution

Variables	Coding	N	%
<u>Control Variable</u>			
Mental Health Spending	1=increase	19	38
	0=decrease	31	62
<u>Independent Variables</u>			
Medicaid	1=Yes	33	66
	0=No	17	34
Education	1=Yes	48	96
	0=No	2	04
Jail Diversion	1=Yes	43	86
	0=No	07	14
Crisis Teams	1=Yes	46	92
	0=No	04	08
Re-entry Program	1=Yes	40	80
	0=No	10	20
Mental Health Court	1=Yes	40	80
	0=No	10	20
Uninsured	1=Yes	23	46
	0=No	27	54
Benzodiazepines	1=Yes	46	92
	0=No	04	08
Antipsychotic medications	1=Yes	45	90
	0=No	05	10
<u>Co-occurring disorder</u>			
Treatment	1=Yes	49	98
	0=No	01	01
Permanent Housing	1=Yes	41	82
	0=No	09	18
Temporary Housing	1=Yes	23	46
	0=No	27	54
Per-Capita Spending		Range=38.38-388.83 Mean= 125.6	
Unemployment Rate 2011		Range= 3.5-13.5 Mean= 8.1	
<u>Dependent Variable</u>			
Incarceration Rate		Range= 169-852 Mean= 459	

Findings

Bearing in mind that there are only a total of 50 cases, a comparison between the states that increased mental health spending (n=19) with those that cut spending (n=31) reveals that there are only a few noteworthy differences between them (see Table 2). With the exception of one mental health service—temporary housing, all of them are within 10 percentage points of the other. Fifty-two percent of the states that cut spending provided temporary housing for the mentally ill compared to only 37% of the states that increased their mental health budgets. Per-capita spending on mental health services is comparable between the groups of states, both in the range of money spent and the average amount spent per state resident. The average unemployment rate in states that increased mental health spending was about a half percentage point lower than in states that had decreased mental health spending (7.9% versus 8.3%, respectively). The ranges are considerably different. While the average unemployment rate in states that increased mental health spending ranged from 3.5% to 11.3%, the range for states that decreased mental health spending is 5.4% to 13.5%.

The incarceration rate, the dependent variable, is considerably higher among the states that decreased mental health spending. While the lower end of the range is comparable (174 versus 169), the upper end of the range is nearly 200 points (660 versus 852). The mean incarceration rate for states that cut their mental health budget is 70 points higher than the incarceration rate for those states that increased their mental health budgets.

Table 2: Characteristics within Each Group for Mental Health Services, Per-Capita Spending, and Incarceration Rate

Variables		States with Increased Spending ¹	States with Decreased Spending ²
Medicaid		68	65
Education		90	100
Jail Diversion		84	87
Crisis Teams		90	93
Re-entry Program		74	84
Mental Health Court		74	84
Uninsured		53	42
Benzodiazepines		95	90
Antipsychotic medications		95	87
Co-occurring disorder Treatment		95	100
Permanent Housing		79	84
Temporary Housing		37	52
Per-Capita Spending	Range=	40.9-346.0	38.38-388.83
	Mean=	122.3	127.67
Unemployment Rate 2011	Range=	3.5- 11.3	5.4- 13.5
	Mean=	7.9	8.3
Incarceration Rate	Range=	174-660	169-852
	Mean=	415.7	485.9

Notes: 1. N=19; 2. N=31

Table 3 presents regression analyses and adjusted R^2 values. The regression analyses examine whether mental health services, per-capita mental health spending, and the unemployment rate are related to the incarceration rate. The adjusted R^2 values report the extent to which mental health programs, per-capita mental health spending, and unemployment explain the variance in the 2011 incarceration rate. Looking first at states that increased spending, the regression model was statistically significant ($F=10.323$, $df=18$, $p=.005$) and the adjusted R^2 indicates that it explains 86% of the variance (adjusted $R^2=.861$) in the incarceration rate. The regression model indicates that states

without “Jail Diversion” programs ($t = -4.626, p \leq .01$) and those that did not provide mental health care to the “Uninsured” ($t = -2.939, p \leq .05$) had higher incarceration rates. States with “Re-entry programs” ($t = 3.769, p \leq .01$) also had higher incarceration rates. States with less “Per-capita Spending” for mental health care ($t = -3.452, p \leq .05$) had higher incarceration rates. It bears mentioning that providing public “Education” about mental illness approached statistical significance ($t = 2.371, p = .055$). The direction of the t -value is counterintuitive in that it suggests that states that have public “Education” about mental illness have higher incarceration rates. The “Unemployment Rate” failed to reach statistical significance.

The regression model for states that cut their mental health budgets was not statistically significant ($F = 1.316, df = 30, p = .291$) and the adjusted R^2 indicates that the independent variables explained only 11.2% of the variance. None of the independent variables was statistically significant.

Table 3: A Comparison of Regression Models and Adjusted R² Values

Variables	States with Increased Spending ¹			States with Decreased Spending ²		
	B	SE	t	B	SE	t
Medicaid	-49.591	63.741	-.778	-105.486	93.663	-1.126
Education	200.504	84.563	2.371 ³	-----	-----	-----
Jail Diversion	-481.644	104.113	-4.626**	364.411	201.111	1.812
Crisis Teams	48.051	129.052	-.372	254.495	371.091	.686
Re-entry Program	417.039	110.639	3.769**	-457.329	309.545	-1.477
Mental Health Court	-10.591	82.474	-.128	64.166	86.468	.742
Uninsured	-166.116	56.528	-2.939*	-7.532	78.321	-.096
Antipsychotic meds	22.399	182.770	.123	279.228	151.161	1.847
Benzodiazepines	-----	-----	-----	-138.057	142.330	-.970
Permanent Housing	82.652	78.631	1.051	34.053	165.887	.205
Temporary Housing	28.362	51.727	.548	23.840	59.814	.399
Per-Capita Spending	-.961	.278	-3.452*	-1.086	.639	-1.700
Unemployment Rate	-28.444	13.989	-2.033	-.880	22.014	-.040
Constant	751.794	97.605	7.702***	317.980	416.041	.764
Model	F=10.323, 18 df, p=.005			F=1.316, 30 df, p=.291		
Adjusted R ²	.861			.112		

Notes: States with increased spending: Benzodiazepines and Co-occurring Disorder Treatment were dropped from the model because of the lack of variation. States with decreased mental health spending: Education and Co-occurring Disorder Treatment were dropped from the model because of the lack of variation.

* $\leq .05$; ** $\leq .01$; *** $\leq .001$

1. N=19; 2. N=31; 3. p=.055

Discussion and Conclusions

There seems to be a relatively common understanding of what the mentally ill need. Even though budgets were cut in most states, it would appear that they were not cut to the extent that services were eliminated. The services in states that cut their budgets were similar to those in states that increased their budgets for mental health services. This particular issue brings us back to the primary limitation of this study. The variables only measure whether a program exists. It does not measure the extent to which

it meets the needs of the mentally ill. One would expect to find difference between states in the quality and availability of mental health services.

This exploratory study examined how mental health spending, state unemployment rates, and the availability of mental health services are related to incarceration rates. The results reveal that among state that increased mental health spending, simply spending more does not result in reductions in the incarceration rate. Spending should be limited to specific programs. “Jail Diversion” programs appear to be important to reducing incarceration rates. The same can be said for providing mental health care for the “Uninsured.” Conversely, the “Re-entry Programs” that are being funded are not reducing recidivism and re-incarceration. More research is needed here to understand what the characteristics are of a good re-entry program, that is one that reduces the likelihood of re-incarceration. Likewise, additional research is needed to better understand how “Per-capita Spending” on mental health care is related to the incarceration of mentally ill persons.

Cutting mental health spending may have an immediate effect on lowering state expenditures, but it appears that in the long-term there is an increase in expenditures when the mentally ill are sentenced to serve prison terms. And, understanding how public “Education” about mental illness may increase incarceration rates requires further investigation. It may be beneficial to examine the content of the curriculum, how the information is delivered, and to whom it is delivered.

The states that cut funding to mental health services saw an increase in the incarceration rate, but the regression analysis fails to provide insight into what might be

contributing to the increase. The “Unemployment Rate” and “Per-capita Spending” on mental health do not appear to be contributing to the rise in the incarceration rate, at least not significantly. It may be worth the time to examine the services that are being offered to the mentally ill, pool limited resources, and redistribute resources to those services that are most promising. That is, it may behoove states that cut mental health funding to supplement programs that (1) reduce the likelihood that the mentally ill will come into contact with the justice system (e.g., programs that pay for medications for the uninsured) or (2) reduce the extent to which the mentally ill are processed into the justice system (e.g., jail diversion programs).

References

- Abram, K.M., & Teplin, L.A. (1991). Co-occurring disorders among mentally ill jail detainees: Implications for public policy. *American Psychologist*, 46, 1036–1045.
- Aron, L., Honberg, R., Duckworth, K. (2009). *Grading the States 2009: A Report on America's Health Care System for Adults with Serious Mental Illness*, Arlington, VA: National Alliance on Mental Illness.
- Bureau of Labor Statistics. (2012). *Unemployment Rates for States, Annual Average Ratings: 2011*. Retrieved from <http://www.bls.gov/lau/lastrk11.htm>
- Cuddeback, G. S., Scheyett, A., Pettus-Davis, C., Morrissey, J. P. (2010). General medical problems of incarcerated persons with severe and persistent mental illness: A population based study. *Psychiatric Services*, 61, 1
- Ditton, P.M. (1999). *Mental health and treatment of inmates and probationers*. Bureau of Justice Special Reports, U.S. Department of Justice, NCJ RU174463.
- Foley, H. A., Sharfstein, S.S (1983). *Madness and government: Who cares for the mentally ill*. American Psychiatric Press. Washington, D.C.
- Frank, R.G., Glied, S.A. (2006). *Better but not well: mental health policy in the united states since 1950*. The Johns Hopkins University Press. Baltimore, MD.

- Grob, G. N. 1992. Mental Health Policy in America: Myths and Realities. *Health Affairs*. 11, 3: 7-22.
- Gold, J.(2011). States' Mental Health Budgets Fall In Recession. Kaiser Health News. Retrieved from <http://www.kaiserhealthnews.org/stories/2011/march/09/state-mental-health-budgets-fall-during-recession.aspx>
- Guerino, ZP., Harrison, P.M., Sobol, W.J. (2011). *Prisoner's in 2010*. Bureau of Justice Statistics.
- Harcourt. B. (2011). *Reducing mass incarceration: Lessons from the deinstitutionalization of mental hospitals in the 1960s*. The Law School. The University of Chicago.
- Health Insurance Portability and Accountability Act. PL104-191, 110 Stat. 1936. (1996).
- Hodgins, S., Isberner-Muller, R. (2000). *Violence, crime and mentally disordered offenders concepts and methods for effective treatment and prevention*. John Wiley and Sons Ltd., West Sussex, England.
- Honberg, Ron (2010). *A guide to mental illness and the criminal justice system*. A systems guide for the families and consumers. National Alliance on Mental Illness. Department of policy and legal affairs. Arlington, VA.
- Kessler, R.C., Delmar, O. Frank, R.G., Olfson, M. Pincus, H.A., Walters, E.E., Wang, P., Wells, K.B. Zaslavsky, A.M., "Prevalence and Treatment of Mental Disorder: 1990 to 2003," *New England Journal of Medicine*, 352 (2005) 2515.
- Lamb, H.R., & Weinberger, L.E. (1998). Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*, 49, 483–492.
- Landsberg, G., Rock, M., Lawrence K.W., Smiley, A. (2002). *Servicing mentally ill offenders: challenges and opportunities for mental health professionals*. Springer Publishing Company Inc. New York, NY.
- Ludlow, R. (1996, October 26). From hospital to prison. Cincinnati Post, p. 1A.
- Marx, Gary (2012). Illinois isolates most dangerous inmates in 'super-max' prison. Chicago Tribune. January, 26, 2012.
- Mental Health Equitable Treatment Act of 2001.s543 (2001).
- Mental Health Parity Act of 2007. P.L. 110-245. S 558 (2007).

- Mowbray, C., Holter, M. (2002). Mental health and mental illness: Out of the closet? *Social service review*, 76. 1. pp135-179.
- National Institute of Mental Health. (2008). Prevalence of Serious Mental Illness Among U.S. Adults by Age, Sex, and Race. Retrieved from http://www.nimh.nih.gov/statistics/SMI_AASR.shtml
- Phaneuf, K. (2012). State pays high price for incarcerating mentally ill. The Connecticut Mirror, retrieved from <http://ctmirror.org/story/15199/state-pays-high-price-incarcerating-large-numbers-mentally-ill>
- Pew Charitable Trust. (2007). *Public safety: Public spending. Forecasting america's prison population 2007-2011*. June
- Raphael, S. (2000). *The deinstitutionalization of the mentally ill and growth in the U.S. prison population: 1971 to 1996*. Goldman School of Public Policy University of California, Berkeley. Berkeley, CA.
- Schmitt, J., Warner, K. Gupta, S. (2010). *The high budgetary cost of incarceration*. Center for Economic and Policy Research. Washington, D.C.
- Shafer, M.S., Arthur, B. Franczak, M. (2004). *An analysis of post-booking jail diversion programming for persons with co-occurring disorders*. Behavioral Sciences and the Law 22: pp771-785. John Wiley and Sons, Ltd.
- Steadman, H. J., McCarty, D. W., Morrissey, J. P. (1989). *The mentally ill in jail planning for essential services*. The Guilford Publications, Inc. New York, NY.
- Sundararaman, R., Redhead, S. C. (no date) The Mental Health Parity Act: A Legislative History. Prepared for Members and Committees of Congress. Retrieved from <http://congressionalresearch.com/RL33820/document.php?study=The+Mental+Health+Parity+Act+A+Legislative+History>
- Toch, H., Adams, K. (2002). Acting out. Maladaptive behavior in confinement. *American Psychological Association*. Washington, D.C.
- Torrey, E.F., Kennard, A.D., Eslinger, D., Lamb, R., Pavle, J. (2010). *More mentally ill people are in jail and prisons than hospitals: A survey of the states*. National Sheriffs Association, Alexandria, VA and Treatment Advocacy Center, Arlington, VA.
- Torrey, E.F., Stieber, J., Ezekiel, J., Wolfe, S.E., Sharfstein, J., Noble, J.H., Flynn, L.M. (1993). Criminalizing the seriously mentally ill: The abuse of jails as mental hospitals. *Innovations & Research*, 2, 11–14.

- Tucker, A., Van Hassell, V., Vecchi, G., Browning, S. (2001). *Responding to persons with mental illness*. Retrieved from www.fbi.gov/stats-services/publications/law-enforcement-bulletin/october-2011/.
- Watson, A., Hanrahan, P., Luchins, D., Lurigio, A. (2001). Mental health courts and the complex issue of mentally ill offenders. *Psychiatric Services*. 52, 4.
- West, H.C., Sobol, W.J., Greenman, S. (2010). *Prisoner's in 2009*. Bureau of Justice Statistics December 2010.
- Wettstein, R. M. (1998). *Treatment of offenders with mental disorders*. The Guilford Press; A Division of Guilford Publications, Inc. New York,
- Wilson, A.B., Draine, J. (2006). Collaborations between criminal justice and mental health systems for prisoner reentry. *Psychiatric Services*. 57,6.